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09/874,365	06/06/2001	Thomas D. Kudrle	CRF D-2688	2949

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Art Unit: 2817

### **DETAILED ACTION**

The following claims have been found objectionable for reasons set forth below:

In claims 10, 19, line 5 of each claim, note that “formed” should be rewritten as -- comprised--.

In claims 11, 20, line 2 of each claim, note that “formed from” should be rephrased as -- comprised of--. In claims 11, 20, line 3 of each claim, note that “formed” should be rewritten as -- disposed--.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371 © of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 10, 13, 16, 17 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Kong et al.

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Kong et al discloses a transmission line structure including air bridge conductors (24, 26, 28) disposed over a substrate (22). Note that any one of conductors (24, 26) or (24, 28) collectively forms the transmission line structure. Such transmission line structure (e.g. 24, 26) including conductive beams each having first end sections anchored at first & second ends thereof to the substrate and a second section (i.e. the air bridge) which is parallel to and spaced by a predetermined distance from the first section and which is connected by a "matching section" which is angled relative to and has bends relative to the parallel first and second sections. In operation, as seen in Fig. 3, appropriate DC control voltages respectively applied drive actuators associated with the transmission line structure which will cause the beam conductor (24) to bend towards either one of beam conductors (26) or (28), depending on the DC control voltage applied, thereby causing the transmission line structure to function as a switch.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

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made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12; 19, 21, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kong et al in view of Sun et al.

Kong et al discloses the claimed invention except that the angled matching section is not disclosed as being a right angle as claimed.

Sun et al discloses micro-mechanical switching arrangement of the bendable type which is suspended over a substrate. In particular, note from fig. 2 that an angled portion between an anchoring portion and the suspended portion comprises a right angle bend (113).

Accordingly, it would have been obvious in view of the references, taken as a whole, to have realized the generic angled matching section in the micromechanical switch of Kong et al by the particular right angle bend as taught by Sun et al. Such a modification would have been considered an obvious substitution of art recognized equivalent angled connections, especially since the generic nature of the matching section bend of Kong et al would have suggested that any equivalent type of matching bend (i.e. right angled) would have been usable therewith, thereby suggesting the obviousness of the combination.

Claims 14, 15; 22, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the preceding rejections as applied to claims 10, 19, respectively above, and further in view of Nguyen et al (of record).

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The above rejections meet the claimed invention except for the microactuator (i.e. a comb drive microactuator) for driving the micromechanical switching structure are not explicitly disclosed.

However, as disclosed in Nguyen et al (e.g. Fig. 4) use of comb drive microactuators (e.g. 60, 62) to drive a micromechanical structure (48) is deemed conventional in the art.

Accordingly, it would have been obvious in view of the references, taken as a whole, to have used the comb drive microactuator, as taught in Nguyen et al (Fig. 4) in place of the generic drive actuator in the Kong et al structure, especially since the generic nature of the Kong et al drive actuator would have suggested that any equivalent drive actuator (i.e. the comb drive microactuator taught in Nguyen et al) would have usable therewith, thereby suggesting the obviousness of such a combination.

Claims 11, 18; 20, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benny Lee whose telephone number is (703) 308 4902.

  
BENNY T. LEE  
PRIMARY EXAMINER  
ART UNIT 2817

B. Lee

March 21, 2003